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FIGURE 1A

ATG	GGG	TGG	CTT	TGC	TCT	GGG	CTC	CTG	TTC	CCT	GTG	AGC	TGC	CTG	-31
Met	Gly	Trp	Leu	Cys	Ser	Gly	Leu	Leu	Phe	Pro	Val	Ser	Cys	Leu	-11
GTC	CTG	CTG	CAG	GTG	GCA	AGC	TCT	GGG	AAC	ATG	AAG	GTC	TTG	CAG	15
Val	Leu	Leu	Gln	Val	Ala	Ser	Ser	Gly	Asn	<u>Met</u>	Lys	Val	Leu	Gln	5
GAG	CCC	ACC	TGC	GTC	TCC	GAC	TAC	ATG	AGC	ATC	TCT	ACT	TGC	GAG	60
Glu	Pro	Thr	Cys	Val	Ser	Asp	Tyr	Met	Ser	Ile	Ser	Thr	Cys	Glu	20
TGG	AAG	ATG	AAT	GGT	CCC	ACC	AAT	TGC	AGC	ACC	GAG	CTC	CGC	CTG	105
Trp	Lys	Met	Asn	Gly	Pro	Thr	Asn	Cys	Ser	Thr	Glu	Leu	Arg	Leu	35
TTG	TAC	CAG	CTG	GTT	TTT	CTG	CTC	TCC	GAA	GCC	CAC	ACG	TGT	ATC	150
Leu	Tyr	Gln	Leu	Val	Phe	Leu	Leu	Ser	Glu	Ala	His	Thr	Cys	Ile	50
CCT	GAG	AAC	AAC	GGA	GGC	GCG	GGG	TGC	GTG	TGC	CAC	CTG	CTC	ATG	195
Pro	Glu	Asn	Asn	Gly	Gly	Ala	Gly	Cys	Val	Cys	His	Leu	Leu	Met	65
GAT	GAC	GTG	GTC	AGT	GCG	GAT	AAC	TAT	ACA	CTG	GAC	CTG	TGG	GCT	240
Asp	Asp	Val	Val	Ser	Ala	Asp	Asn	Tyr	Thr	Leu	Asp	Leu	Trp	Ala	80
GGG	CAG	CAG	CTG	CTG	TGG	AAG	GGC	TCC	TTC	AAG	CCC	AGC	GAG	CAT	285
Gly	Gln	Gln	Leu	Leu	Trp	Lys	Gly	Ser	Phe	Lys	Pro	Ser	Glu	His	95
GTG	AAA	CCC	AGG	GCC	CCA	GGA	AAC	CTG	ACA	GTT	CAC	ACC	AAT	GTC	330
Val	Lys	Pro	Arg	Ala	Pro	Gly	Asn	Leu	Thr	Val	His	Thr	Asn	Val	110
TCC	GAC	ACT	CTG	CTG	CTG	ACC	TGG	AGC	AAC	CCG	TAT	CCC	CCT	GAC	375
Ser	Asp	Thr	Leu	Leu	Leu	Thr	Trp	Ser	Asn	Pro	Tyr	Pro	Pro	Asp	125
AAT	TAC	CTG	TAT	AAT	CAT	CTC	ACC	TAT	GCA	GTC	AAC	ATT	TGG	AGT	420
Asn	Tyr	Leu	Tyr	Asn	His	Leu	Thr	Tyr	Ala	Val	Asn	Ile	Trp	Ser	140
GAA	AAC	GAC	CCG	GCA	GAT	TTC	AGA	ATC	TAT	AAC	GTG	ACC	TAC	CTA	465
Glu	Asn	Asp	Pro	Ala	Asp	Phe	Arg	Ile	Tyr	Asn	Val	Thr	Tyr	Leu	155
GAA	CCC	TCC	CTC	CGC	ATC	GCA	GCC	AGC	ACC	CTG	AAG	TCT	GGG	ATT	510
Glu	Pro	Ser	Leu	Arg	Ile	Ala	Ala	Ser	Thr	Leu	Lys	Ser	Gly	Ile	170
TCC	TAC	AGG	GCA	CGG	GTG	AGG	GCC	TGG	GCT	CAG	TGC	TAT	AAC	ACC	555
Ser	Tyr	Arg	Ala	Arg	Val	Arg	Ala	Trp	Ala	Gln	Cys	Tyr	Asn	Thr	185
ACC	TGG	AGT	GAG	TGG	AGC	CCC	AGC	ACC	AAG	TGG	CAC	AAC	TCC	TAC	600
Thr	Trp	Ser	Glu	Trp	Ser	Pro	Ser	Thr	Lys	Trp	His	Asn	Ser	Tyr	200
AGG	GAG	CCC	TTC	GAG	CAG	CAC	CTC	CTG	CTG	GGC	GTC	AGC	GTT	TCC	645
Arg	Glu	Pro	Phe	Glu	Gln	His	<u>Leu</u>	<u>Leu</u>	<u>Leu</u>	<u>Gly</u>	<u>Val</u>	<u>Ser</u>	<u>Val</u>	<u>Ser</u>	215
TGC	ATT	GTC	ATC	CTG	GCC	GTC	TGC	CTG	TTG	TGC	TAT	GTC	AGC	ATC	690
<u>Cys</u>	<u>Ile</u>	<u>Val</u>	<u>Ile</u>	<u>Leu</u>	<u>Ala</u>	<u>Val</u>	<u>Cys</u>	<u>Leu</u>	<u>Leu</u>	<u>Cys</u>	<u>Tyr</u>	<u>Val</u>	<u>Ser</u>	<u>Ile</u>	230
ACC	AAG	ATT	AAG	AAA	GAA	TGG	TGG	GAT	CAG	ATT	CCC	AAC	CCA	GCC	735
<u>Thr</u>	Lys	Ile	Lys	Lys	Glu	Trp	Trp	Asp	Gln	Ile	Pro	Asn	Pro	Ala	245

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FIGURE 1B

CGC	AGC	CGC	CTC	GTG	GCT	ATA	ATA	ATC	CAG	GAT	GCT	CAG	GGG	TCA	780
Arg	Ser	Arg	Leu	Val	Ala	Ile	Ile	Ile	Gln	Asp	Ala	Gln	Gly	Ser	260
CAG	TGG	GAG	AAG	CGG	TCC	CGA	GGC	CAG	GAA	CCA	GCC	AAG	TGC	CCA	825
Gln	Trp	Glu	Lys	Arg	Ser	Arg	Gly	Gln	Glu	Pro	Ala	Lys	Cys	Pro	275
CAC	TGG	AAG	AAT	TGT	CTT	ACC	AAG	CTC	TTG	CCC	TGT	TTT	CTG	GAG	870
His	Trp	Lys	Asn	Cys	Leu	Thr	Lys	Leu	Leu	Pro	Cys	Phe	Leu	Glu	290
CAC	AAC	ATG	AAA	AGG	GAT	GAA	GAT	CCT	CAC	AAG	GCT	GCC	AAA	GAG	915
His	Asn	Met	Lys	Arg	Asp	Glu	Asp	Pro	His	Lys	Ala	Ala	Lys	Glu	305
ATG	CCT	TTC	CAG	GGC	TCT	GGA	AAA	TCA	GCA	TGG	TGC	CCA	GTG	GAG	960
Met	Pro	Phe	Gln	Gly	Ser	Gly	Lys	Ser	Ala	Trp	Cys	Pro	Val	Glu	320
ATC	AGC	AAG	ACA	GTC	CTC	TGG	CCA	GAG	AGC	ATC	AGC	GTG	GTG	CGA	1005
Ile	Ser	Lys	Thr	Val	Leu	Trp	Pro	Glu	Ser	Ile	Ser	Val	Val	Arg	335
TGT	GTG	GAG	TTG	TTT	GAG	GCC	CCG	GTG	GAG	TGT	GAG	GAG	GAG	GAG	1050
Cys	Val	Glu	Leu	Phe	Glu	Ala	Pro	Val	Glu	Cys	Glu	Glu	Glu	Glu	350
GAG	GTA	GAG	GAA	GAA	AAA	GGG	AGC	TTC	TGT	GCA	TCG	CCT	GAG	AGC	1095
Glu	Val	Glu	Glu	Glu	Lys	Gly	Ser	Phe	Cys	Ala	Ser	Pro	Glu	Ser	365
AGC	AGG	GAT	GAC	TTC	CAG	GAG	GGA	AGG	GAG	GGC	ATT	GTG	GCC	CGG	1140
Ser	Arg	Asp	Asp	Phe	Gln	Glu	Gly	Arg	Glu	Gly	Ile	Val	Ala	Arg	380
CTA	ACA	GAG	AGC	CTG	TTC	CTG	GAC	CTG	CTC	GGA	GAG	GAG	AAT	GGG	1185
Leu	Thr	Glu	Ser	Leu	Phe	Leu	Asp	Leu	Leu	Gly	Glu	Glu	Asn	Gly	395
GGC	TTT	TGC	CAG	CAG	GAC	ATG	GGG	GAG	TCA	TGC	CTT	CTT	CCA	CCT	1230
Gly	Phe	Cys	Gln	Gln	Asp	Met	Gly	Glu	Ser	Cys	Leu	Leu	Pro	Pro	410
TCG	GGA	AGT	ACG	AGT	GCT	CAC	ATG	CCC	TGG	GAT	GAG	TTC	CCA	AGT	1275
Ser	Gly	Ser	Thr	Ser	Ala	His	Met	Pro	Trp	Asp	Glu	Phe	Pro	Ser	425
GCA	GGG	CCC	AAG	GAG	GCA	CCT	CCC	TGG	GGC	AAG	GAG	CAG	CCT	CTC	1320
Ala	Gly	Pro	Lys	Glu	Ala	Pro	Pro	Trp	Gly	Lys	Glu	Gln	Pro	Leu	440
CAC	CTG	GAG	CCA	AGT	CCT	CCT	GCC	AGC	CCG	ACC	CAG	AGT	CCA	GAC	1365
His	Leu	Glu	Pro	Ser	Pro	Pro	Ala	Ser	Pro	Thr	Gln	Ser	Pro	Asp	455
AAC	CTG	ACT	TGC	ACA	GAG	ACG	CCC	CTC	GTC	ATC	GCA	GGC	AAC	CCT	1410
Asn	Leu	Thr	Cys	Thr	Glu	Thr	Pro	Leu	Val	Ile	Ala	Gly	Asn	Pro	470
GCT	TAC	CGC	AGC	TTC	AGC	AAC	TCC	CTG	AGC	CAG	TCA	CCG	TGT	CCC	1455
Ala	Tyr	Arg	Ser	Phe	Ser	Asn	Ser	Leu	Ser	Gln	Ser	Pro	Cys	Pro	485
AGA	GAG	CTG	GGT	CCA	GAC	CCA	CTG	CTG	GCC	AGA	CAC	CTG	GAG	GAA	1500
Arg	Glu	Leu	Gly	Pro	Asp	Pro	Leu	Leu	Ala	Arg	His	Leu	Glu	Glu	500
GTA	GAA	CCC	GAG	ATG	CCC	TGT	GTC	CCC	CAG	CTC	TCT	GAG	CCA	ACC	1545
Val	Glu	Pro	Glu	Met	Pro	Cys	Val	Pro	Gln	Leu	Ser	Glu	Pro	Thr	515

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FIGURE 1C

ACT	GTG	CCC	CAA	CCT	GAG	CCA	GAA	ACC	TGG	GAG	CAG	ATC	CTC	CGC	1590
Thr	Val	Pro	Gln	Pro	Glu	Pro	Glu	Thr	Trp	Glu	Gln	Ile	Leu	Arg	530
CGA	AAT	GTC	CTC	CAG	CAT	GGG	GCA	GCT	GCA	GCC	CCC	GTC	TCG	GCC	1635
Arg	Asn	Val	Leu	Gln	His	Gly	Ala	Ala	Ala	Ala	Pro	Val	Ser	Ala	545
CCC	ACC	AGT	GGC	TAT	CAG	GAG	TTT	GTA	CAT	GCG	GTG	GAG	CAG	GGT	1680
Pro	Thr	Ser	Gly	Tyr	Gln	Glu	Phe	Val	His	Ala	Val	Glu	Gln	Gly	560
GGC	ACC	CAG	GCC	AGT	GCG	GTG	GTG	GGC	TTG	GGT	CCC	CCA	GGA	GAG	1725
Gly	Thr	Gln	Ala	Ser	Ala	Val	Val	Gly	Leu	Gly	Pro	Pro	Gly	Glu	575
GCT	GGT	TAC	AAG	GCC	TTC	TCA	AGC	CTG	CTT	GCC	AGC	AGT	GCT	GTG	1770
Ala	Gly	Tyr	Lys	Ala	Phe	Ser	Ser	Leu	Leu	Ala	Ser	Ser	Ala	Val	590
TCC	CCA	GAG	AAA	TGT	GGG	TTT	GGG	GCT	AGC	AGT	GGG	GAA	GAG	GGG	1815
Ser	Pro	Glu	Lys	Cys	Gly	Phe	Gly	Ala	Ser	Ser	Gly	Glu	Glu	Gly	605
TAT	AAG	CCT	TTC	CAA	GAC	CTC	ATT	CCT	GGC	TGC	CCT	GGG	GAC	CCT	1860
Tyr	Lys	Pro	Phe	Gln	Asp	Leu	Ile	Pro	Gly	Cys	Pro	Gly	Asp	Pro	620
GCC	CCA	GTC	CCT	GTC	CCC	TTG	TTC	ACC	TTT	GGA	CTG	GAC	AGG	GAG	1905
Ala	Pro	Val	Pro	Val	Pro	Leu	Phe	Thr	Phe	Gly	Leu	Asp	Arg	Glu	635
CCA	CCT	CGC	AGT	CCG	CAG	AGC	TCA	CAT	CTC	CCA	AGC	AGC	TCC	CCA	1950
Pro	Pro	Arg	Ser	Pro	Gln	Ser	Ser	His	Leu	Pro	Ser	Ser	Ser	Pro	650
GAG	CAC	CTG	GGT	CTG	GAG	CCG	GGG	GAA	AAG	GTA	GAG	GAC	ATG	CCA	1995
Glu	His	Leu	Gly	Leu	Glu	Pro	Gly	Glu	Lys	Val	Glu	Asp	Met	Pro	665
AAG	CCC	CCA	CTT	CCC	CAG	GAG	CAG	GCC	ACA	GAC	CCC	CTT	GTG	GAC	2040
Lys	Pro	Pro	Leu	Pro	Gln	Glu	Gln	Ala	Thr	Asp	Pro	Leu	Val	Asp	680
AGC	CTG	GGC	AGT	GGC	ATT	GTC	TAC	TCA	GCC	CTT	ACC	TGC	CAC	CTG	2085
Ser	Leu	Gly	Ser	Gly	Ile	Val	Tyr	Ser	Ala	Leu	Thr	Cys	His	Leu	695
TGC	GGC	CAC	CTG	AAA	CAG	TGT	CAT	GGC	CAG	GAG	GAT	GGT	GGC	CAG	2130
Cys	Gly	His	Leu	Lys	Gln	Cys	His	Gly	Gln	Glu	Asp	Gly	Gly	Gln	710
ACC	CCT	GTC	ATG	GCC	AGT	CCT	TGC	TGT	GGC	TGC	TGC	TGT	GGA	GAC	2175
Thr	Pro	Val	Met	Ala	Ser	Pro	Cys	Cys	Gly	Cys	Cys	Cys	Gly	Asp	725
AGG	TCC	TCG	CCC	CCT	ACA	ACC	CCC	CTG	AGG	GCC	CCA	GAC	CCC	TCT	2220
Arg	Ser	Ser	Pro	Pro	Thr	Thr	Pro	Leu	Arg	Ala	Pro	Asp	Pro	Ser	740
CCA	GGT	GGG	GTT	CCA	CTG	GAG	GCC	AGT	CTG	TGT	CCG	GCC	TCC	CTG	2265
Pro	Gly	Gly	Val	Pro	Leu	Glu	Ala	Ser	Leu	Cys	Pro	Ala	Ser	Leu	755
GCA	CCC	TCG	GGC	ATC	TCA	GAG	AAG	AGT	AAA	TCC	TCA	TCA	TCC	TTC	2310
Ala	Pro	Ser	Gly	Ile	Ser	Glu	Lys	Ser	Lys	Ser	Ser	Ser	Ser	Phe	770
CAT	CCT	GCC	CCT	GGC	AAT	GCT	CAG	AGC	TCA	AGC	CAG	ACC	CCC	AAA	2355
His	Pro	Ala	Pro	Gly	Asn	Ala	Gln	Ser	Ser	Ser	Gln	Thr	Pro	Lys	785
ATC	GTG	AAC	TTT	GTC	TCC	GTG	GGA	CCC	ACA	TAC	ATG	AGG	GTC	TCT	2400
Ile	Val	Asn	Phe	Val	Ser	Val	Gly	Pro	Thr	Tyr	Met	Arg	Val	Ser	800

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Figure 2A

FR1									
L1	1	GAAATTGTGT	TGACGCAGTC	TCCAGGCACC	CTGTCTTTGT	CTCCAGGGGA	AAGAGCCACC	60	
L2	1	GAAATTGTGT	TGACGCAGTC	TCCAGGCACC	CTGTCTTTGT	CTCCAGGGGA	AAGAGCCACC	60	
L3	1	GAAATTGTGT	TGACGCAGTC	TCCAGGCACC	CTGTCTTTGT	CTCCGGGGGA	AAGAGCCACC	60	
L4	1	GAAATTGTGA	TGACGCAGTC	TCCAGGCACC	CTGTCTTTGT	CTCCAGGGGA	AAGAGCCACC	60	
L5	1	GATATTGTGC	TGACCCAGTC	TCCAGCCACC	CTGTCTTTGT	CTCCAGGGGA	AAGAGCCACC	60	
L6	1	GATATTGTGC	TGACGCAGAC	TCCAGCCACC	CTGTCTTTGT	CTCCAGGGGA	AAGAGCCACC	60	
CDR1									
L1	61	CTCTCCTGCA	GGGCCAGTCA	GAGTGTTAGC	AGCAGCTACT	TAGCCTGGTA	CCAGCAGAAA	120	
L2	61	CTCTCCTGCA	GGGCCAGTCA	GAGTGTTAGC	AACAGCTACT	TAGCCTGGTA	CCAGCAGAAA	120	
L3	61	CTCTCCTGCA	GGGCCAGTCA	GACTGTAAAC	AGCGACTACT	TAGCCTGGTA	CCAGCAGAAA	120	
L4	61	CTCTCCTGCA	GGGCCAGTCA	GAGTGTTAGC	AGCGACTACT	TAGCCTGGTA	CCAGCAGAAA	120	
L5	61	CTCTCCTGCA	GGGCCAGTCA	GAGTGTTAAC	AGCAACTACT	TAGCCTGGTA	CCAGCAGAAA	120	
L6	61	CTCTCCTGCA	GGGCCAGTCA	GAGTGTTGGC	AGCAGCTACT	TAGCCTGGTA	CCAGCAGAGA	120	
FR2									
CDR2									
L1	121	CCTGGCCAGG	CTCCCAGGCT	CCTCATCTTT	GGTGCATCCA	GCAGGGCCAC	TGGCATCCCA	180	
L2	121	CCTGGCCAGG	CTCCCAGGCT	CCTCATCTAT	GGTGCATCCA	GCAGGGCCCC	TGGCATCCCA	180	
L3	121	CCGGGCCAGG	CTCCCAGGCT	CCTCATCTAT	GGTGCATCCA	GCAGGGCCAC	TGGCATCCCA	180	
L4	121	CCTGGCCAGG	CTCCCAGGCT	CCTCATCTAT	GGTGCATCTA	GCAGGGCCCTC	TGGCATCCCA	180	
L5	121	CCTGGCCAGG	CTCCCAGGCT	CCTCATCTAT	GGTACATCCT	ACAGGGCCAC	TGGCATCCCA	180	
L6	121	CCTGGCCAGG	CTCCCAGGCT	CCTCATCTAT	GGTGCATCCA	GCAGGGCCAC	TGGCATCCCG	180	
FR3									
L1	181	GACAGGTTCA	GTGGCAGTGG	GTCTGGGACA	GACTTCACTC	TCACCATCAG	CAGACTGGAG	240	
L2	181	GACAGGTTCA	GTGGCAGTGG	GTCTGGGACA	GACTTCACTC	TCACCATCAG	CAGACTGGAG	240	
L3	181	GACAGGTTCA	GTGGCAGTGG	GTCTGGGACA	GACTTCACTC	TCACCATCAG	CAGACTGGAG	240	
L4	181	GACAGGTTCA	GTGGCAGTGG	GTCTGGGACA	GACTTCACTC	TCACCATCAG	CAGACTGGAG	240	
L5	181	GACAGGTTCA	GTGGCAGTGG	GTCTGGGACA	GACTTCACTC	TCACCATCAC	CAGACTGGAG	240	
L6	181	GACAGGTTCA	GTGGCAGTGG	GTCTGGGACA	GACTTCACTC	TCACGATCAG	CAGACTGGAG	240	
CDR3									
L1	241	CCTGAAGATT	TTGCAGTGTA	TTACTGTCAG	CAGTATGGTA	GCTCACCTCC	GTGGACGTTT	300	
L2	241	CCTGAAGATT	TTGCAGTGTA	TTACTGTCAG	CAGTATGATC	ACTCAGCAGG	GTGGACGTTT	300	
L3	241	CCTGAAGATT	TTGCAGTCTA	TTACTGTCAG	CAGTATGGTA	GCTCACCTCC	GTGGACGTTT	300	
L4	241	CCTGAAGATT	TTGCAATATA	TTACTGTCAG	CAGTATGGTA	GCTCACCTCC	GTGGACGTTT	300	
L5	241	CCTGAAGATT	TTGCAGTGTA	TTACTGTCAG	CAGTATGGTA	GCTCACCCAC	GTGGACGTTT	300	
L6	241	CCTGAAGATT	TTGCAGTGTA	TTATTGTCAG	CAGTATGGAA	GTCACCTCC	GTGGATGTTT	300	
FR4									
L1	301	GGCCAAGGGA	CCAAGGTGGA	AATCAAAA	327				
L2	301	GGCCAAGGGA	CCAAGGTGGA	GATCAAAA	327				
L3	301	GGCCAAGGGA	CCAAAGTGGA	TATCAAAA	327				
L4	301	GGCCAAGGGA	CCAAGGTGGA	AATCAAAA	327				
L5	301	GGCCAAGGGA	CACGACTGGA	GATTAAAA	327				
L6	301	GGCCAAGGGA	CCAAGGTGGA	GATCAAAA	327				

Figure 2C

						FR3		
H1	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H2	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H3	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H4	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H5	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H6	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H7	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H8	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H9	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H10	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H11	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H12	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H13	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H14	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H15	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H16	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H17	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H18	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H19	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H20	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H21	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H22	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H23	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240
H24	181	<u>GACTCCGTGA</u>	AGGGCCGATT	CACCATCTCC	AGAGACAATG	CCAAGAACTC	CTTGTATCTT	240

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Figure 2D

H1	241	CAAATGAACA	GCCTGAGAGC	CGAGGACATG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H2	241	CAAATGAACA	GCCTGAGTGC	CGAGGACATG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H3	241	CAAATGAACA	GCCTGAGAGC	CGAGGACATG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H4	241	CAAATGAACA	GCCTGAGAGC	CGAGGACATG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H5	241	CAAATGAACA	GCCTGAGAGC	CGAGGACATG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H6	241	CAAATGAACA	GCCTGAGAGC	CGAGGACATG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H7	241	CAAATGAACA	GCCTGAGAGC	CGAGGACATG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H8	241	CAAATGAACA	GCCTGAGAGC	CGAGGACATG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H9	241	CAAATGAACA	GCCTGAGAGC	CGAGGACATG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H10	241	CAAATGAACA	GCCTGAGAGC	CGAGGACATG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H11	241	CAAATGAACA	GCCTGAGAGC	CGAGGACATG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H12	241	CAAATGAACA	GCCTGAGAGC	CGAGGACATG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H13	241	CAAATGAACA	GCCTGAGTGC	CGAGGACATG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H14	241	CAAATGAACA	GCCTGAGAGC	CGAGGACACG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H15	241	CAAATGAACA	GCCTGAGAGC	CGAGGACACG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H16	241	CAAATGAACA	GCCTGAGAGC	CGAGGACACG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H17	241	CAAATGAACA	GCCTGAGAGC	CGAGGACACG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H18	241	CAAATGAACA	GCCTGAGAGC	CGAGGACACG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H19	241	CAAATGAACA	GCCTGAGAGC	CGAGGACACG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H20	241	CAAATGAACA	GCCTGAGAGC	CGAGGACACG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H21	241	CAAATGAACA	GCCTGAGAGC	CGAGGACACG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H22	241	CAAATGAACA	GCCTGAGAGC	CGAGGACACG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H23	241	CAAATGAACA	GCCTGAGAGC	CGAGGACACG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300
H24	241	CAAATGAACA	GCCTGAGAGC	CGAGGACACG	GCTGTGTATT	ACTGTGCAAG	<u>AGGGAGGTAC</u>	300

		CDR3		FR4		
H1	301	<u>TACTTTGACT</u>	ACTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H2	301	<u>TACTTCACCC</u>	ACTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H3	301	<u>TGGTACAACA</u>	ACTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H4	301	<u>TACTTCCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H5	301	<u>TACTTCACGA</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H6	301	<u>TGGTACCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H7	301	<u>TGGTACCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H8	301	<u>TGGTTCCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H9	301	<u>TGGTTCCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H10	301	<u>TGGTACCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H11	301	<u>TGGTACCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H12	301	<u>TACTTCCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H13	301	<u>TACTTCCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H14	301	<u>TACTTCCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H15	301	<u>TACTTTGACT</u>	ACTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H16	301	<u>TACTTCACCC</u>	ACTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H17	301	<u>TGGTACAACA</u>	ACTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H18	301	<u>TACTTCACGA</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H19	301	<u>TGGTACCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H20	301	<u>TGGTACCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H21	301	<u>TGGTTCCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H22	301	<u>TGGTTCCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H23	301	<u>TGGTACCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345
H24	301	<u>TGGTACCCGT</u>	GGTGGGGCCA	GGAACCCCTG	GTCACCGTCT	CCTCA 345

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Figure 3

	FR1	CDR1	FR2	CDR2	FR3	CDR3	FR4
L1	EIVLTQSPGTLSPGERATLSCRA	SVSSVLA	WYQKPGQAPRL	IFGASSRANGIPDRFSGSGGT	FTLTISRLEPEDFAV	YVCQQYGSPPPWTFQG	TKVELK
L2	---	-N-	---	-Y-	---	-DH-AG-	---
L3	---	T-N-D-	---	-Y-	---	-R-	-D-
L4	---	D-	---	-Y-	---	-F-	-I-
L5	D-	-N-N-	---	-Y-T-Y-	---	-T-	-RL-
L6	D-	-G-	-R-	-Y-	---	-M-	---
H1	EVQLVQSGGGLVHPGGLRLSCAGSGFTFSNMFVWRQAPGKGL	EWVSGIGTGGATNYADSVKGRFTISRDNAKNSLYIQMNSLR	AE DMAVYVCARGYYFDYWGQGLTVTVSS				
H2	---	---	---	-S-	---	-S-	-TH-
H3	---	---	---	-S-	---	-WYNN-	---
H4	---	---	---	---	---	-PW-	---
H5	---	---	---	---	---	-TR-	---
H6	---	---	---	---	---	-YPW-	---
H7	---	---	---	-S-	---	-YPW-	---
H8	---	---	---	---	---	-W-PW-	---
H9	---	---	---	-S-	---	-W-PW-	---
H10	---	---	---	---	---	-WYFW-	---
H11	---	---	---	-S-	---	-WYFW-	---
H12	---	---	---	-S-	---	-PW-	---
H13	---	---	---	---	---	-PW-	---
H14	E-Q	A	---	-S-	---	-T-	---
H15	E-Q	A	---	-S-	---	-T-	---
H16	E-Q	A	---	-S-	---	-T-	TH
H17	E-Q	A	---	-S-	---	-T-	WYNN
H18	E-Q	A	---	-S-	---	-T-	TR
H19	E-Q	A	---	-S-	---	-T-	YPW
H20	E-Q	A	---	---	---	-T-	YPW
H21	E-Q	A	---	-S-	---	-T-	W-PW
H22	E-Q	A	---	---	---	-T-	W-PW
H23	E-Q	A	---	-S-	---	-T-	WYFW
H24	E-Q	A	---	-T-	---	-T-	WYFW